

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the above-identified application:

1. (Currently Amended) ~~An ablative rocket nozzle~~ ~~An ablative composite assembly for deployment on a rocket, the ablative rocket nozzle comprising, in combination:~~

a first ablative composite sub-assembly and a second ablative composite sub-assembly; ~~[[and]]~~

a plurality of radial openings formed through an outer wall of said first ablative composite sub-assembly, each radial opening in said plurality of radial openings extending in radial direction substantially perpendicular to the longitudinal axis of the ablative rocket nozzle;

a first plurality of axial openings in said first ablative composite sub-assembly;

a second plurality of axial openings in said second ablative composite sub-assembly and generally aligning with said first plurality of axial openings; and

a film adhesive ~~disposed between coupled to both~~ said first ablative composite sub-assembly and said second ablative composite sub-assembly, said film adhesive including a third plurality of openings therethrough generally aligning with said first plurality of axial openings and said second plurality of axial openings, said film adhesive joining together said first ablative composite sub-assembly to said second ablative composite sub-assembly ~~to provide the ablative composite assembly~~ when said film adhesive is cured.

2. (Currently Amended) The ~~ablative rocket nozzle~~ ~~ablative composite assembly~~ according to claim 1 wherein a portion of a surface of said film adhesive is coupled to an end portion of said first ablative composite sub-assembly and a

portion of an opposite surface of said film adhesive is coupled to an end portion of said second ablative composite sub-assembly.

3. (Currently Amended) The ablative rocket nozzle ~~ablative composite assembly~~ according to claim 1 further comprising a housing enclosing said first and second ablative composite sub-assembly.

4. (Currently Amended) The ablative rocket nozzle ~~ablative composite assembly~~ according to claim 1 wherein said first ablative composite sub-assembly includes a first substantially cylindrical member, wherein said first substantially cylindrical member has an elevated end portion, and wherein a portion of a surface of said film adhesive is coupled to a portion of a surface of said elevated end portion of said first cylindrical member.

5. (Currently Amended) The ablative rocket nozzle ~~ablative composite assembly~~ according to claim 1 wherein said second ablative composite sub-assembly includes a second substantially cylindrical member;

wherein a portion of a surface of an end portion of said second cylindrical member is coupled to an opposite surface of said film adhesive; and

wherein a substantially cylindrical protrusion is located at an opposite end of said second cylindrical member.

6. (Currently Amended) The ablative rocket nozzle ~~ablative composite assembly~~ according to claim 1 wherein said film adhesive is a sealant.

7. (Currently Amended) The ablative rocket nozzle ~~ablative composite assembly~~ according to claim 1 wherein said film adhesive comprises a thermosetting film adhesive.

8. (Currently Amended) The ablative rocket nozzle ~~ablative-composite assembly~~ according to claim 1 wherein said film adhesive comprises a nitrile phenolic film adhesive.

9. (Currently Amended) The ablative rocket nozzle ~~ablative-composite assembly~~ according to claim 8 wherein the thickness of said film adhesive is about 9-11 mils (0.2-0.3 mm).

10.-12. (Cancelled).

13. (Currently Amended) The ablative rocket nozzle ~~ablative-composite assembly~~ according to claim 8 wherein said film adhesive is cured at a temperature of substantially 300<sup>0</sup> F. (149<sup>0</sup> C.) for at least about 2 hours with a bond line pressure of substantially 25 pounds per square inch (172 KPa).

14. (Currently Amended) The ablative rocket nozzle ~~ablative-composite assembly~~ according to claim 13 wherein said film adhesive is cured at a temperature of substantially 300<sup>0</sup> F. (149<sup>0</sup> C.) for about 3 hours with a bond line pressure of substantially 25 pounds per square inch (172 KPa).

15. (Currently Amended) The ablative rocket nozzle ~~ablative-composite assembly~~ according to claim 1 wherein the ablative composite assembly is made of at least silica phenolic.

16. (Currently Amended) An ablative rocket nozzle ~~An ablative composite for deployment on a rocket, the ablative rocket nozzle gas valve comprising, in combination:~~

a first ablative composite sub-assembly and a second ablative composite sub-assembly;

a housing substantially enclosing said first and second ablative composite sub-assembly; [[and]]

a film adhesive ~~disposed between coupled to both~~ said first ablative composite sub-assembly and said second ablative composite sub-assembly, said film adhesive joining together said first ablative composite sub-assembly to said second ablative composite sub-assembly to provide the ablative composite gas valve when said film adhesive is cured;

a first plurality of openings in said first ablative composite sub-assembly;  
and

a second plurality of openings in said second ablative composite sub-assembly and generally aligning with said first plurality of openings when said first ablative composite sub-assembly is adhesively joined to said second ablative composite sub-assembly by said film adhesive;

wherein said film adhesive includes a third plurality of openings therethrough that generally aligns with said first plurality of openings in said first ablative composite sub-assembly and with said second plurality of openings in said second ablative composite sub-assembly.

17. (Currently Amended) The ~~ablative rocket nozzle combination~~ of claim 16 wherein a portion of a surface of said film adhesive is coupled to an end portion of said first ablative composite sub-assembly and a portion of an opposite surface of said film adhesive is coupled to an end portion of said second ablative composite sub-assembly.

18. (Currently Amended) The ~~ablative rocket nozzle combination~~ of claim 16 wherein said first ablative composite sub-assembly includes a first substantially cylindrical member;

wherein said first cylindrical member has an enlarged opening for hot gas flow through said first cylindrical member and a plurality of openings through said first cylindrical member;

wherein said first substantially cylindrical member has an elevated end portion and a portion of a surface of said elevated end portion has a multiplicity of openings; and

wherein a portion of a surface of said film adhesive is coupled to a portion of a surface of said elevated end portion of said first cylindrical member.

19. (Currently Amended) The ablative rocket nozzle combination of claim 18 wherein said first cylindrical member further includes a vertical wall, a portion of a surface of said wall having a multiplicity of radial openings.

20. (Cancelled).

21. (Currently Amended) The ablative rocket nozzle combination of claim 16[[20]] wherein said second ablative composite sub-assembly further comprises a substantially cylindrical protrusion at an opposite end of said second cylindrical member, said cylindrical protrusion having an enlarged opening for hot gas flow through said second cylindrical member.

22.-28. (Cancelled).

29. (New) The ablative rocket nozzle of claim 1 further comprising a guide pin extending from one of the first plurality of axial openings, through one of the third plurality of axial openings, and into one of the second plurality of openings to align the first ablative composite sub-assembly with the second ablative composite sub-assembly.

30. (New) The ablative rocket nozzle of claim 29 wherein the guide pin contacts the first ablative sub-assembly proximate a first axial in the first plurality of axial opening.

31. (New) The ablative rocket nozzle of claim 30 wherein an outer diameter of the guide pin is substantially equivalent of the inner diameter of the first axial opening.